

REMARKS

Claims 26-30 and 47-52 are pending in the Application. Claim 26 has been amended. No new matter has been added.

Claims 26 and 47 are independent.

On page 2 of the Office Action, the drawings are objected to because they do not include the following reference sign(s) mentioned in the description: the condenser 302, the contaminant remover 304, the sub-cooler 306, the catheter 310, the supply chamber 360, and the junction 519. Appropriate corrected drawings have been included in replacement sheets enclosed herewith.

On page 2 of the Office Action, Claims 26-30 and 47-52 are rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement. On Page 3 of the Office Action, the Examiner stated, “The specification does not adequately disclose a first valve in the first coolant flow path as recited in claims 26 and 47.” Applicant respectfully traverses this rejection. On page 18 of the filed application, the specification recites, “A programmable controller 370 is in communication with and controls one or more valves, such as a first valve 372, to regulate flow of coolant through the conduit 366 and into the medical device...” Further, the first valve and coolant flow path are illustrated in FIG. 8A as described in the specification. Because the elements of Claims 26 and 47 are disclosed and described in both the specification and the figures, the rejection is believed to have been overcome.

On page 3 of the Office Action, Claims 26-30 are rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject

matter which applicant regards as the invention. The Examiner states that Claim 26 recites “the programmable controller” as having insufficient antecedent basis for such a limitation. Applicant has amended Claim 26 to reflect “a programmable controller,” thereby establishing sufficient antecedent basis. Thus, the rejection is believed to have been overcome.

On page 3 of the Office Action, Claims 47 and 49-52 are rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,146,411 to Noda, et al. Applicant respectfully traverses this rejection. On page 3 of the Office Action, the Examiner states that Noda ‘411 discloses “a first valve (62) in the first coolant flow path and a programmable controller (24).” However, Noda ‘411 discloses that “bypass valves 62...are utilized to restrict fluid circulation in ***secondary circuit 40***,” (Column 6, Lines 40-41)(emphasis added). Further, Figure 1 of Noda ‘411 clearly illustrates valves 62 as located in the secondary fluid flow path. Applicant’s Claim 47 specifically states “a first valve in the ***first coolant flow path***,” (emphasis added) which is neither suggested nor disclosed by the Noda ‘411 reference, as Noda explicitly states that the bypass valves 62 are in the secondary fluid circuit.

In addition, Noda ‘411 discloses that “proportional temperature controller 24...serves to control the temperature of the second fluid by controlling the amount of cooling or heating to which the second fluid of ***secondary circuit 40*** is subjected,” (Column 6, Lines 59-63)(emphasis added). Noda ‘411 neither teaches nor suggests “the programmable controller controlling the flow of coolant through the ***first path*** to regulate the cooling power of the medical device,” (emphasis added) as stated in Applicant’s Claim 47.

On page 4 of the Office Action, the Examiner further states that “Noda et. al teaches all of the limitations of the claims except the sensor being located in the medical device,” and that

such a location “would have been obvious to an artisan.” However, the “the temperature measurement from temperature probe 22 is provided as feedback in a closed loop to the proportional temperature controller 24,” (Column 6, Lines 56-58). As stated above, “controller 24 serves to control the temperature of...the second fluid of secondary circuit 40,” (Column 6, Lines 60-63). As such, it would be contrary to the teaching of Noda ‘411 to integrate the sensor in the distal end of the medical device of Applicant’s invention, as the Examiner has asserted. Applicant’s Claim 47 includes “a programmable controller in communication with at least one distal sensor in the medical device...the programmable controller controlling the flow...*through the first path.*”(emphasis added). Applicant’s sensor, medical device, and programmable controller are in the first flow path, which is opposite and contradictory to the cooling system as disclosed by Noda ‘411. Because Noda ‘411 fails to disclose or render obvious Applicant’s invention, and further teaches away from Applicant’s Claim 47, the rejection is believed to have been overcome, placing Claim 47 in a condition for allowance. Further, Claims 49-52 are believed to be allowable as they depend from Claim 47.

On page 4 of the Office Action, Claims 26-30 and 48 are rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,146,411 to Noda, et al., further in view of Little, et al., U.S. 6,306,129. Applicant respectfully traverses this rejection. For the reasons stated above, Noda ‘411 neither alone nor in combination with Little ‘129 teaches or suggests Claim 26 as to render obvious Applicant’s invention. Furthermore, Noda ‘411, whether alone or in combination with Little ‘129, fails to teach or suggest “a coolant scavenging system,” or that “the first cooling system and the medical device comprise a substantially open-loop,” as stated in Applicant’s Claim 26. To the contrary, Noda ‘411 discloses a “fluid volume

reservoir...preferably a conventional IV bag 38," (Column 5, Lines 11-12) as a coolant source, yet does not disclose any element which would render obvious the "coolant scavenging system" of Applicant's Claim 26. Additionally, Noda '411 provides a "self-contained primary circuit," (Column 4, Line 60) which circulates fluid in a closed loop, as illustrated in Figure 1. The self-contained, closed-loop fluid circuit of Noda '411 prevents the use of a "coolant scavenging system" and is expressly opposite to having an open-loop flow path as claimed by Applicant. Because Noda '411 fails to disclose a "coolant scavenging system," and further teaches away from the use of an open-loop flow path, Noda '411, either alone or in combination with Little '129, does not render obvious Applicant's Claim 26. As such, Claim 26 is believed to be patentable over the cited references. Further, Claims 27-30 and 48 are believed to be allowable as they depend from Claims 26 and 47, respectively.

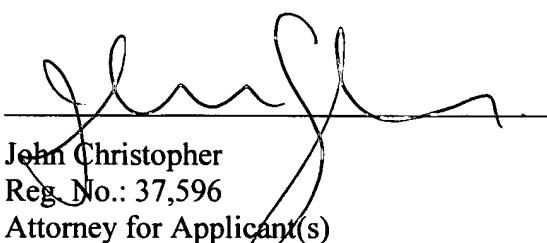
For all of the above reasons, the claim objections are believed to have been overcome placing Claims 26-30 and 45-52 in condition for allowance, and reconsideration and allowance thereof is respectfully requested.

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The Examiner is encouraged to telephone the undersigned to discuss any matter that would expedite allowance of the present application.

Respectfully submitted,

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